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ABSTRACT

A survey of alumni of the University of Rhode Island, in the graduating classes of 1955, 1960, and 1970, had a 25 percent response rate. Data were collected on the current work status of the alumni, number of different jobs held and different kinds of work done since graduation, training after the bachelor's degree, relationship of undergraduate major to current occupation, and satisfaction with present job. These data are arranged in tables, and the statistical analyses are described. The survey questionnaire is included. (MSE)

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URI Alumni:

The Relationship between Occupations and Undergraduate Curriculums

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6/1/75

URI Alumni :

THE RELATIONSHIP BETWEEN OCCUPATIONS AND UNDERGRADUATE CURRICULUMS

Among the questions most frequently asked by undergraduate students is: what kind of job can I get if I major in_____? Career counselors and followers of employment trends can give answers which make logical connections between certain courses of study and certain jobs (e.g., between physical education as an undergraduate major and high school coaching), or which inform students that employers in certain fields are looking for people with certain kinds of academic preparation. These answers, however, provide only one kind of information. It seems equally important to know what kinds of employment individuals of varying academic backgrounds have actually found, and retained, following their graduation from college with an undergraduate degree.

Our URI alumni provided us with an excellent source of respondents for the kinds of questions about studies and employment which we wanted to ask. We devised a questionnaire[1], as brief and to-the-point as possible (see Appendix A), which we mailed in August of 1974 to 3053 alumni.

This Alumni Survey was mailed to all listed members of the Classes of 1955, 1960, 1965 and 1970. The decision to begin with the class of 1955 is based on some facts of our University's history. Although first established in 1888 as the State Agriculture School (later changed, in 1892, to Rhode Island College of Agriculture and Mechanic Arts) it was not until 1951 that we actually became the University of Rhode Island by an act of the General Assembly.

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[1]We acknowledge, with gratitude, the contributions made to the content of the questionnaire by Ray Stockard, Russell Gilmore, and William Haller. We are also grateful to the Alumni Office for generously sharing with us the names and addresses of alumni.

Thus our "modern" period began not too long ago and the first graduating class of that period can be identified as the Class of '55. These students had available to them undergraduate majors in the Schools of Engineering, Science and Business, Agriculture, Home Economics, and Arts and Sciences. The College of Pharmacy was not formally established until 1957.

One-fourth of the persons surveyed by mail responded and it is of interest to note that the proportion who did so is approximately the same within each of our Alumni Classes. Table 1 below presents the numbers of persons who responded, and their breakdown by general curriculum (with Arts and Sciences undifferentiated). About one-quarter of the alumni in each group reported a change of "major" sometime during their undergraduate years ('55 - 22%; '60 - 24%; '65 - 21%; '70 - 34%) but the curriculum shown in Table 1 is the one in which the student graduated. It is clear from Table 1 that the contribution made by Arts and Sciences to the graduating classes of URI increased from one-third to one-half during the period from 1955 to the present.

What are our Alumni doing currently? Answers to this question are presented in Table 2. Persons are included in the classification of full-time employment if they so described their present status but some of these persons are also, at the same time, pursuing post-graduate or vocational studies ('55 - 4.6%, '60 - 4.1%, '65 - 7.3%, '70 - 18.8%). Those persons engaged in a combination of part-time activities are included in the "other" category.

We were interested in the employment histories of our respondents in terms of number of <u>different jobs</u> they have held and number of <u>different kinds of work</u> they have engaged in since graduating from URI. Data relevant to these questions are summarized in Table 3.

Table 1

Alumni:

Proportion of Returns and Other Characteristics

	Class of '55	'60	'65	'70	total
Number of Surveys Mailed	318	492	842	1401	3053
Number of Surveys Returned	87	123	206	336	752
Proportion of Surveys Returned	.27	.25	.24	.24	.25
Proportion Entering URI as Freshmen	.94	.84	.81	.82	
Major Curriculum (proportions of total number of respondents in each class)					
Arts and Sciences	.31	.42	.52	.52	
Business	.20	.19	.13	.19	
Engineering	.24	.24	.19	.14	
Home Economics	.09	.08	.09	.06	
Nursing	.02	.01	.01	.04	
Pharmacy	.08[a]	.02	.01	.01	
Agriculture/Resource Dev.	.06	.04	.04	.04	

[a]These individuals did their undergraduate work at the R. I. College of Pharmacy and Allied Sciences but were adopted as URI alumni.

Table 2

Current Full-Time Work Status of Alumni

Proportions of Persons Engaged full-time in:	Class of '55	'60	'65	'70
Employment	.77	.79	.71	.82
Homemaking	.10	.08	.11	.05
Vocational Training	.05	.04	.03	.01
Graduate Study	.00	.01	.02	.03
Other Ways[a]	.08	.08	.13	.09

[a]In this category are included persons describing themselves as unemployed (approximately 2.5% in the Class of '60 and 1.5% in each of the Classes of '65, and '70) or pursuing some combination of part-time activities: employment, vocational or graduate school study, and/or homemaking.

Table 3

Proportions of Persons Holding Different Jobs and Doing Different Kinds of Work Since Graduation

	Class of '55	'60	'65	'70
Number of Different Jobs				
1	.13	.19	.24	.33
2 - 3	.49	.50	.57	.44
4 or more	.32	.23	.15	.10
0 or No Response	.05	.09	.04	.13
Number of Different Kinds of Work				
1	.23	.34	.36	.31
2 - 3	.40	.39	.40	.33
4 or more	.16	.11	.12	.08
0 or No Response	.18	.16	.11	.28

It is apparent from Table 3 that the more time which has elapsed between graduation and the present the more have our respondents been able to change, and have actually succeeded in changing, their jobs. If the pattern of our oldest alumni (Class of '55) is repeated by the younger ones then as many as 49% can anticipate having 2 or 3 different jobs within a 20 year period, and an additional 32% can anticipate having 4 or more different jobs. Of even more significance than number of jobs is the number of different kinds of occupation. Here, again, if the younger alumni encounter similar conditions of employment to those of the older URI graduates, 40% can anticipate shifting their type of work two or three times within a 20 year period while an additional 18% can anticipate working at 4 or more different kinds of jobs. Even among most recent graduates 41% report having already engaged in more than one kind of work. There is thus every reason to suspect that this pattern of shifting employment in both specific job and type of work will continue.

How many of our URI graduates depend solely upon their undergraduate training for job skills? Data relevant to this issue can come from answers given to three of the questions included in the survey. One asked for information about on-the-job training in the respondent's current employment and two others asked for information regarding additional degrees earned and additional education or training received since receipt of the bachelor's degree. Table 4 presents a summary of these data.

Table 4

Education or Training after

the Bachelor's Degree

Proportion of Respondents who:	Class of '55	'60	'65	'70
Earned additional degrees	.31	.41	.44	.27
Received additional training but no formal degree	.37	.26	.34	.23
Are currently attending school (graduate, professional or vocational)	.08	.13	.15	.30
Received on-the-job training for current job	.33	.24	.28	.46

From Table 4 one can see that for the majority of our alumni, job-related education of some kind has continued past the baccalaureate. The total percentage of alumni in each of our target classes which has earned another degree or received some additional training (not including on-the-job) is 68, 67, 78, and 50, for the Classes of '55, '60, '65, and '70, respectively. Others are currently attending school but in this category are included some who may already have received one additional degree. These figures clearly indicate that, for most of our graduates, a bachelor's degree is an intermediate and not a final educational step. It is also instructive to note the sizable percentage of respondents who received training on-the-job for their present employment. These data indicate that many employers expect and, in fact, do provide for their employees specific instruction relevant to a specific job which goes beyond the academic preparation brought to employment by college graduates.

The three most important single questions to which this research was addressed are ones to which we will now turn our attention. "How", we asked, "is your present occupation (type of work) related to your undergraduate major?"

It is this relationship between undergraduate curriculum and later occupation on which we must have some factual information if we are to give our students sound advice. Our respondents' qualitative answers to this question were classified and put into three categories: directly related, indirectly related, and not at all related. Table 5 below presents the proportions of respondents falling into each category.

Table 5

Judged Relationship between Undergraduate Major and Current Occupation

	Class of			
Proportions for whom Undergraduate Major is:	'55	'60	'65	'70
Directly related to current job	.38	.47	.36	.54
Indirectly related to current job	.23	.17	.23	.05
Not related to current job	.23	.17	.24	.28
No response	.16	.19	.17	.13

It is plain from the figures in Table 5 that less than half of our graduates end up working at jobs that are directly related to the curriculum which they pursued as undergraduates. This is a most important datum for all of us in higher education (students, faculty and administrators) to consider. Table 5 also plainly shows that as our graduates get older and accumulate more work experience the probability that their undergraduate major will be directly relevant to their jobs tends to decrease. Whereas 54% of the Class of '70

were working at jobs directly related to their majors, this percentage is only 38% for the Class of '50.

A logical question at this point is whether there is a difference between our professionally trained alumni (those who received their degrees from the Colleges of Business, Engineering, Home Economics, Nursing, Pharmacy or Resource Development) and our Arts and Sciences graduates with respect to this variable of relationship between job and undergraduate curriculum. Our data can provide an answer.

In Table 6 the respondents in each Alumni Class are divided into two groups, Arts and Sciences and Professional College graduates. One can see that while the proportion of professional college graduates whose current jobs are directly related to their undergraduate majors is typically larger than the proportion of Arts and Sciences students for whom this is the case, there is considerable variation from one five year period to the next, including a reversal for the Class of '65. It was apparently the Arts and Sciences student who was more able, then, to obtain employment in an area directly related to undergraduate curriculum.

Chi Square analyses were performed to test the significance of the relationship between professional vs Arts and Sciences degree and current job relevance to undergraduate major[1]. For the Classes of '55, '60, '65, and '70, respectively, the obtained Chi Squares are 2.07, 1.74, 5.28, and 7.45. Only the latter two figures are statistically significant at less than .05 level of probability (df=1). That we cannot generalize from these findings, however, is apparent when we remember that the trends for the Classes of '65 and '70 are in opposite directions!

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[1] The No Response category was excluded from these analyses.

Table 6

Arts and Sciences Graduates Compared with Professional College Graduates on Relationship between Current Job and Undergraduate Curriculum

Class of:	Degree obtained from	N	Proportions for whom current job and undergraduate curriculum are: Directly related	Indirectly or Unrelated	No Response
'55	Arts and Sciences	27	25.9	55.5	18.5
	Professional Colleges	60	43.3	43.3	13.3
'60	Arts and Sciences	52	40.4	38.4	21.2
	Professional Colleges	71	53.5	29.6	16.9
'65	Arts and Sciences	108	44.4	40.7	14.8
	Professional Colleges	98	27.6	52.0	20.4
'70	Arts and Sciences	172	46.5	37.2	16.3
	Professional Colleges	164	64.0	26.3	9.8

We also asked our respondents how satisfied they were with their present jobs. Answers to this question are summarized in Table 7.

Table 7

Satisfaction with Present Job

	Class of			
Proportion who are:	'55	'60	'65	'70
Extremely satisfied	.37	.29	.23	.26
Very satisfied	.33	.38	.38	.38
Moderately satisfied	.15	.16	.22	.20
Poorly or Not at all Satisfied	.00	.01	.03	.07
No answer	.15	.15	.14	.09

In each of our Alumni groups more than 2/3 expressed either extreme or great satisfaction with their present jobs. This is certainly gratifying. In addition, the percentage of persons expressing satisfaction with current employment appears relatively stable as one moves from the older to the younger alumni. Within the Class of '55, 70% reported themselves either extremely or very satisfied, and this percentage changes only slightly to 67 for the Class of '60, to 61 for the Class of '65, and to 64 for the most recent Class of '70. We again were able to explore the relationship between Arts and Sciences vs professional college background and this variable of job satisfaction. Table 8 presents the relevant data.

Table 8

Arts and Sciences Graduates Compared with Professional College Graduates on Satisfaction with Present Job

Class of	Degree obtained from	N	Proportions who are: Extremely or Very Satisfied	Moderately, Poorly or Not Satisfied	No Response
'55	Arts and Sciences	27	70.3	11.1	18.5
	Professional Colleges	60	71.7	16.7	11.7
'60	Arts and Sciences	52	65.4	13.5	21.2
	Professional Colleges	71	70.5	19.7	9.9
'65	Arts and Sciences	108	60.2	27.8	12.0
	Professional Colleges	98	61.2	20.4	18.4
'70	Arts and Sciences	172	68.6	19.2	12.2
	Professional Colleges	164	59.7	34.1	6.1

Both simple inspection of the data shown in Table 8 and Chi Square analyses[1] indicate that satisfaction with current job is generally unrelated to whether one has pursued an Arts and Sciences or professional undergraduate curriculum. Only in the case of the Class of '70 is the relationship a statistically significant one ($X^2=7.77$, df=1, $p < .01$), with Arts and Sciences majors reporting a greater degree of job satisfaction than professional college graduates.

[1]The no-response categories were excluded from these analyses.

Our final question to the alumni, and the last to be considered in this report was "Do you believe that your undergraduate college education was generally worthwhile?" Answering in the affirmative was an extremely large percentage of each of our Alumni groups, as follows: Class of '55 - 83%; Class of '60 - 89%; Class of '65 - 89%; and Class of '70 - 86%. That the percentage is stable across a span of so many years reinforces the validity of the data. It is, of course, entirely possible that those alumni who chose to respond to our questionnaire were the URI graduates who were the most pleased with their undergraduate experience. Perhaps it was those with complaints who preferred to remain silent. We can never be sure how those who responded differed from those who did not but if we can assume that our samples were, in fact, representative of the total alumni populations we can be pleased with the number of our students who found their education worthwhile.

That a far greater porportion of our alumni found their undergraduate education worthwhile than are working at jobs which are directly relevant to it is one of the major conclusions of this study.

What are some of the others? I believe one may conclude that, for our alumni, job-relevant education has not stopped with the attainment of an undergraduate degree. Many have received on-the-job training and gone on for additional schooling. A realistic expectation for our graduates is that they will change their jobs and kinds of work more often than not. Only one in three alumni reported having worked at only one type of occupation. Among our oldest alumni only a little more than one-third was currently working at a job directly related to their undergraduate major and even for our most recent alumni only about half were doing so. It may well be, therefore, that our students should concentrate

on developing skills related to flexibility and on learning how to learn.

We should as a university encourage our students to feel confident that their experience here can be worthwhile not because it will lead directly to a specific kind of employment but because it provides the kind of practise in the intelligent solution of problems which is generalizable across life situations of all kinds.

UNIVERSITY OF RHODE ISLAND
KINGSTON, R. I. 02881

University College

Appendix A-1

March 29, 1974

Dear U.R.I. Alumnus,

Unless you have been keeping in touch with the newest developments at your alma mater, you may not have heard of the existence of University College. This youngest addition to U.R.I.'s family of undergraduate colleges is for all freshman and sophomore students who begin their studies here.

While in University College a student may choose to shift from one curriculum to another. As students' interests change so too will their advisers since University College has a large staff of faculty who represent all the areas of undergraduate concentration. One of the major questions our students are likely to ask is, "How will what I study at U.R.I. relate to my later employment?" To help us answer this question we are turning to you for assistance.

Would you be good enough to share with us some of your experiences in the world of work? The enclosed brief questionnaire will, we believe, take only a few minutes of your time and yet your responses will be most useful in giving us some idea of how the jobs being done by our alumni match their undergraduate studies.

We are requesting the cooperation only of alumni from the classes of 1970, 1965, 1960, and 1955 so each response is an important one. To facilitate return of your questionnaire a stamped, addressed envelope is enclosed.

Thank you, in advance. We will certainly share the information we obtain in the form of a public report after we have summarized and analyzed the results.

Yours truly,

Bernice Lott

Bernice Lott
Dean, University College

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Appendix A-2

UNIVERSITY OF RHODE ISLAND

UNIVERSITY COLLEGE

ALUMNI SURVEY

1. Date of Graduation from U.R.I. (with an undergraduate degree)_____

2. Did you enter as a freshman?_____ or transfer student?_____

3. What was your major subject (as an undergraduate)?_____

   If you changed majors, list each in chronological order below:

   _____

   _____

   _____

4. Please describe your present status by checking one or more of the following categories:

	full time	part time
Employed*	_____	_____
Graduate Student	_____	_____
in Vocational Training	_____	_____
Homemaker	_____	_____
Other (specify)	_____	_____
Unemployed	_____	

   (*includes military service)

5. If employed:

   a. What is your current occupation?_____
      (be specific)

   b. Present employer?_____

   c. Did you receive any on-the-job training for this work?_____

      for how long a time period?_____

   d. How is your present occupation (type of work) related to your undergraduate major?

University College
Alumni Survey

e. how satisfied are you with your present job?

extremely | very | moderately | poorly | not at all

(X the appropriate place on the above scale)

6. If you have been employed at any time since graduating from U.R.I.:

a. how many different jobs have you held?_____

b. how many different kinds of work have you done?_____

7. What additional degrees have you earned since obtaining your Bachelor's degree at U.R.I.? _____ _____ _____

8. What additional formal education or vocational training have you received since obtaining your Bachelor's degree at U.R.I.?

_____ _____

_____ _____

9. If currently in school (graduate, professional, or vocational):

a. what are you studying?_____

b. what is your occupational goal?_____

c. how are your present studies related to your undergraduate major?

10. Do you believe that your undergraduate college education was generally worthwhile?

Yes_____ Why?

No _____ Why?

Not sure_____ Explain.

Thank you very much for your cooperation!